Subject Index—Volume 26

Abbreviations and symbols used in this index and their meanings follow:
AVR - Audiovisual Review
BR - Book Reviews
CR - Courseware Review
GR - Good Reading
L - Letter to the Editor
* or # following the page number for an entry indicates that there appears in this volume either a Letter to the Editor (*) or an Erratum (#) which pertains to that entry.

Announcements, News, and Awards
Physics Organizational Activities
TPT Department: Apparatus
TPT Department: The AV Corner
TPT Department: Book Reviews
TPT Department: Courseware Review
TPT Department: Deck the Halls
TPT Department: DOING Physics
TPT Department: Editorial
TPT Department: Etcetera
TPT Department: Figuring Physics
TPT Department: Good Reading from Other Journals
TPT Department: How Things Work
TPT Department: In My Opinion
TPT Department: Letters to the Editor
TPT Department: 19th Century Textbook Illustrations
TPT Department: Physics Problems
TPT Department: Questions Students Ask
TPT Department: SI Notes
TPT Department: String and Sticky Tape
TPT Department: The TPT Family
TPT Department: Would You Believe?
Errors in Physics Classroom Materials
Textbooks for Undergraduates
Textbooks for Students in Grades 9–12
Textbooks for Students in Grades K–8
Course Design and Evaluation
Science in Elementary School
Science in Secondary School
Curricula and Evaluations
Teaching Methods and Strategies
Learning Theory and Science Teaching
Audio and Visual Aids, Films, Electronic Video Devices
Other Instructional Aids; Posters, Cartoons, Art, Etc.
Instructional Computer Use, Classroom
Instructional Computer Use, Laboratory
Computer Software and Software Reviews
Testing Theory and Techniques
Demonstration Experiments and Apparatus
Laboratory Experiments and Apparatus
Laboratory Course Design, Organization, and Evaluation
Physics Games and Contests
General Physics
Biographical, Historical, and Personal Notes
History of Science
Science and Society
Physics of Games and Sports
Careers in Physics and Science
Other Topics of General Interest
Mathematical Methods in Physics
Classical and Quantum Physics: Mechanics and Fields
General Relativity and Gravitation
Measurement Science, General Laboratory Techniques, and Instrumentation Systems
Specific Instrumentation and Techniques of General Use in Physics
The Physics of Elementary Particles and Fields
Nuclear Physics
Atomic and Molecular Physics
Electricity and Magnetism
Optics
Acoustics
Heat Flow, Thermal and Thermodynamic Processes
Mechanics, Elasticity, Rheology
Vibrations and Mechanical Waves
Fluid Dynamics
Kinetic and Transport Theory, and Other Properties of Fluids
Mechanical and Acoustical Properties of Condensed Matter
Thermal Properties of Condensed Matter
General Topics in Electrical and Magnetic Devices
Areas of General Interest to Physicists
Fundamental Astronomy/Astrophysics; Instrumentation, Techniques, and Astronomical Observations
Errata

Month	*Page Nos.*	*Month*	*Page Nos.*
January	1–64	September	321–416
February	65–128	October	417–484
March	129–192	November	485–548
April	193–256	December	549–611
May	257–320		

ANNOUNCEMENTS, NEWS, AND AWARDS

1988 Distinguished Service Citation–D. Rae Carpenter, Jr.; **26**, 205
1988 Distinguished Service Citation—Donna A. Berry; **26**, 204
1988 Distinguished Service Citation—Richard Bryant Minnix; **26**, 205
1988 Distinguished Service Citation—Joe Pizzo; **26**, 206
1988 Distinguished Service Citation—Robert F. Tinker; **26**, 206
1988 Melba Newell Phillips Award—H. Richard Crane; **26**, 330
1988 Oersted Medal–Norman F. Ramsey; **26**, 204
1988 Robert A. Millikan Lecturer—Robert G. Greenler; **26**, 331
XX International Physics Olympiad; **26**, 432

PHYSICS ORGANIZATIONAL ACTIVITIES

Physics Students' Day at Six Flags/Magic Mountain—John McGehee; **26**, 12 *
XX International Physics Olympiad; **26**, 432

TPT DEPARTMENT; APPARATUS

Color Mixing Using a Single Projector—Marinus G. Luttikhuizen; **26**, 296
Converting a Hand Calculator into an Event Counter—John Kwasnoski; **26**, 109
A Demonstration to Show the Upthrust Exerted by Air—Zhu E—Qing; **26**, 401
Dynamical Balance and the Rotating Rod—A Personal Demonstration—Clifton Bob Clark and Stuart Thompson; **26**, 237
The Genecon Hand—Operated Generator—Chris Chiaverina; **26**, 41

An Inexpensive Acoustic Trigger for Dramatic Flash Photographs—Arthur B. Western and J.H. Archibald; **26**, 464
Measurement of a Thermodynamic Constant—Aaron Mc Alexander; **26**, 235
Measuring Capacitance and the Dielectric Constant—Ellis D. Noll; **26**, 169
A Method of Recording Rotational Motion on a Conventional Air Table—Neves Pereira and Stuart M. Quick; **26**, 170
Optical Fiber Communications—Carl Throckmorton and Joe Dey; **26**, 530
A Photogate Design for Air Track Experiments—P.F. Hinrichsen; **26**, 42
Simple Free Fall Apparatus—John N. Fox, N. Gaggini and J. Eddy; **26**, 108
The Slooooow Camera—Charlotte T. Farrell; **26**, 581
Who Will Win the Race?—Robert H. March; **26**, 297

TPT DEPARTMENT; THE AV CORNER

The Art of Performing Lecture Demonstrations—K.R. Evans; **26**, 242
Astronomy: Comets—William Luzader; **26**, 585
Career Video—Mary Ethel Parrott; **26**, 466
A Modern Galileo—John L. Roeder; **26**, 404
Television Experiments—Larry D. Kirkpatrick; **26**, 541

TPT DEPARTMENT; BOOK REVIEWS

The Advancement of Science, and its Burdens, G. Holton, Cambridge Univ. Press, NY, 1986—Gerald F. Wheeler; **26**, 253
Atmospheric Electrostatics, L. Wahlin, Research Studies Press, Ltd., and John Wiley and Sons, NY, 1986—Walter Roy Mellen; **26**, 318
Beyond Engineering, H. Petroski, St. Martin's Press, NY, 1986—Anthony J. Baratta; **26**, 250
Beyond the Quantum, M. Talbot, Macmillan Pub. Co., NY, 1987—Gordon J. Aubrecht, II; **26**, 253
The Cambridge Astronomy Guide, B. Liller and B. Mayer, *Cambridge Univ. Press, England*, 1985—*William Luzader*; **26**, 190
Civil Defense: A Choice of Disasters, J. Dowling and E.M. Harrell, Ed., AIP, NY, 1987—Fred B. Otto; **26**, 480
Computer Problems for Classical Dynamics: An Integrated Approach, C. Leming, Harcourt Brace Jovanovich, CA—Robert J. Beichner; **26**, 591
Engineering Projects for Young Scientists, P. Goodwin, Franklin Watts, NY, 1987—Dennis P. Zicko; **26**, 483
Exploratorium Cookbook III and Working Prototypes: Exhibit Design at the Exploratorium, F. Oppenheimer and the Expl. Staff, Exploratorium, S.F.—Andy Graham; **26**, 320

The Forces of Nature, 2nd ed., P.C.W. Davies, Cambridge Univ. Press, NY, 1986—Robert P. Bauman; **26**, 319
The Ghost in the Atom, P.C.W. Davies and J.R. Brown, Ed., Cambridge Univ. Press, NY, 1986—Tom Southworth; **26**, 483
A Guide to Small Wind Energy Conversion Systems, J. Twidell, Ed., Cambridge Univ. Press, NY, 1987—Laurent Hodges; **26**, 481
Inquiry into Physics, V.J. Ostdiek and D.J. Bord, West Pub. Co., MN, 1987—Poovan Murugesan; **26**, 415
Intellectual Mastery of Nature: Theoretical Physics from Ohm to Einstein, 2 vols., C. Jungnickel and R. McCormmach, Univ. of Chicago Press, IL—Daniel M. Siegel; **26**, 317
Knotted Doughnuts and Other Mathematical Entertainments, M. Gardner, W.H. Freeman & Co., NY, 1986—Charles Kaufman; **26**, 62
Main Points in Physics, J. Morgan and F. Meeking, Jacaranda Press, Australia, 1987—John J. Russell; **26**, 482
Mathematics Review Workbook for College Physics, H.T. Hudson, Little, Brown & Co., MA, 1986—Alpha E. Wilson; **26**, 63
Matter and Energy, P.T. Spencer, K.G. McNeill and J.H. MacLachlan, Irwin Pub., Canada, 1987—Janice G. Kaliski; **26**, 546
The Mechanical Universe—Mechanics and Heat, Adv. Ed., S.C. Frautschi, R.P. Olenick, T.M. Apostil and D.L. Goodstein, Cambridge Univ. Press, NY, 1986—Ronald E. Smith; **26**, 191
The Musician's Guide to Musical Acoustics, M. Campbell and C. Greated, MacMillan Pub. Co., NY, 1987—Thomas D. Rossing; **26**, 482
The Neglect of Experiment, A. Franklin, Cambridge Univ. Press, NY, 1986—A.C. Nunes; **26**, 189
The Particle Hunters, Y. Ne'eman and Y. Kirsh, Cambridge Univ. Press, NY, 1986—James H. Stith; **26**, 251
Physics Demonstrations and Experiments for High Schools, G.E. Jones, Mississippi State Univ., Phys. Dept., 1987—Charles Lang; **26**, 189

Physics for Scientists and Engineers with Modern Physics, 2nd ed., R. A. Serway, Saunders College Pub., NY, 1986—Larry D. Kirkpatrick; **26**, 254
The Physics of Vibrations and Waves, D.M. Scott, Merrill Pub. Co., OH, 1985—Eugene P. Mosca; **26**, 62
Planet Earth, J. Weiner, Bantam Books, NY, 1986—Frank Lock; **26**, 191
Practical Astronomy, D.H. DeVorkin, Smithsonian Inst. Press, WA, 1986—James C. Kernohan; **26**, 63
Principles of Physics, F. J. Blatt, Allyn and Bacon, MA, 1986—Rodney Labrecque; **26**, 252
Problems in Physics, E.D. Gardiner and B.L. McKittick, McGraw—Hill Book Co., Australia, 1985—Robert Marzewski; **26**, 480

Quantum Physics: Illusion or Reality?, A. Rae, Cambridge Univ. Press, NY—John L. Hubisz; **26**, 250
The Quantum Universe, T. Hey and P. Walters, Cambridge Univ. Press, 1987—Leonard M. Kahn; **26**, 414
Quasar Astronomy, D. W. Weedman, Cambridge Univ. Press, 1986—Francine Jackson; **26**, 254
Quasars, Redshifts, and Controversies, Berkeley Interstellar Media, 1987—Francine Jackson; **26**, 592

Realistic Applications in Mechanics, The Spode Group, Oxford Univ. Press, MA, 1986—Margaret S. Greenwood; **26**, 414

The Riddle of Gravitation, P.G. Bergmann, Charles Scribner's Sons, NY, 1987—Louis H. Cadwell; **26**, 546

Scientific Programming with Macintosh Pascal, R.E. Crandall and M. Colgrove, John Wiley & Sons, Inc., NY, 1986—L. David Roper; **26**, 320
Seeing the Light: Optics in Nature, Photography, Color Vision and Holography, D.S. Falk, D.R. Brill, D.G. Stork, Harper and Row Pub., Inc., NY, 1986—Michael J. Ruiz; **26**, 252
A Skeleton in the Darkroom, G. Shapiro, Harper & Row Pub., Inc., CA, 1986—Clarice D. Anderes; **26**, 250
Societal Issues, Scientific Viewpoints, M.A. Strom, Ed., AIP, NY, 1987—Thomas D. Miner; **26**, 547
Technical Physics, 2nd ed., P.J. Ouseph, John Wiley & Sons, Inc., NJ, 1986—Anthony J. Baratta; **26**, 318
To Engineer Is Human — The Role Of Failure In Successful Design, H. Petroski, St. Martin's Press, NY, 1985—Anthony J. Baratta; **26**, 251
To Utopia and Back, N.H. Horowitz, Freeman, NY, 1986—J. Russell Harkay; **26**, 319
Undergraduate Education in Chemistry and Physics, M.R. Rice, Ed., Univ. of Chicago, 1986—Rexford E. Adelberger; **26**, 317

Understanding Circuit Analysis, K. Eckert, D & K Publishers, La Mesa, CA, 1985—Gene A. Stringer; **26**, 190
Wind as a Geological Process on Earth, Mars, Venus, and Titan, R. Greeley and J.D. Iverson, Cambridge Univ. Press, NY, 1985—Carl C. Fields; **26**, 592
The Wisdom of Science: Its Relevance to Culture and Religion, H. Brown, Cambridge Univ. Press, NY, 1986—Courtney W. Willis; **26**, 480
Working Prototypes: Exhibit Design at the Exploratorium, Frank Oppenheimer and the Expl. Staff, Exploratorium, CA, 1986—Andy Graham; **26**, 320

TPT DEPARTMENT; COURSEWARE REVIEW

Broderbund Software: *Science Toolkit Master Module and Module 1—Speed and Motion*—Robert A. Cline and John S. Risley; **26**, 111
A Comparison of Sonic Rangers for Demonstrations and Experiments in Mechanics—Robert A. Cline and John S. Risley; **26**, 46
Educational Materials and Equipment Company: *Collisions and Simple Harmonic Motion*—LeVonda S. Ritchie and John S. Risley; **26**, 302
Vernier Software: *Precision Timer II*—John C. Park; **26**, 402

TPT DEPARTMENT; DECK THE HALLS

The "Ting—a—Ling" Machine—Clifford Bettis; **26**, 304
Airplane Dynamics: Engine Thrust, Engine Braking, and Wing Lift—Robert Kasting; **26**, 122
Ice and Balls—Carol L. Miles; **26**, 536
An Interactive Soap Film Apparatus—Chris Chiaverina; **26**, 238
Rotational Motion Demonstrator—Everette E. Tompkins; **26**, 187
Simple Vibrating Systems—Thomas D. Rossing; **26**, 50
Skiing Revisited — To Lean Or Not To Lean?—Philip W. Gronseth and Marc R. Hallada; **26**, 584

TPT DEPARTMENT; DOING PHYSICS

Bubble Maker Interference—Earl Zwicker and Peter Insley; **26**, 184
Flying Halloween Witch—Earl Zwicker and Peter Insley; **26**, 476
Frames of Reference—Earl Zwicker and Scott Welty; **26**, 245
Ladder Physics—Earl Zwicker and Joe Meyer; **26**, 532
Lemon Screamer—Earl Zwicker and James Szeszol; **26**, 60
Newton's Laws with Jumping Disks—Earl Zwicker and Ed McNeil; **26**, 308
Timing Projectile Motion—Earl Zwicker and Ann Brandon; **26**, 124

TPT DEPARTMENT; EDITORIAL

Ferment in Introductory College Physics—Robert Resnick; **26**, 75

TPT DEPARTMENT; ETCETERA

Etcetera—Albert A. Bartlett; **26**, 52, 125, 176, 249, 298, 412, 475, 545, 590

TPT DEPARTMENT; FIGURING PHYSICS

Electric Circuit—Paul G. Hewitt; **26**, 313
Falling in Air—Paul G. Hewitt; **26**, 117
The Helium—Filled Balloon will...?—Paul G. Hewitt; **26**, 179
Icecraft with Fan—Paul G. Hewitt; **26**, 57
Lamp Efficiency—Paul G. Hewitt; **26**, 247
Magnetic Tack—Paul G. Hewitt; **26**, 593
Moving Molecules—Paul G. Hewitt; **26**, 473
Skidding—Paul G. Hewitt; **26**, 543

TPT DEPARTMENT; GOOD READING FROM OTHER JOURNALS

Chaos, Strange Attractors, and Fractal Basin Boundaries in Nonlinear Dynamics, C. Grebogi, E. Ott and J.A. Yorke, *Science*, Oct. 30, 1987—John L. Roeder; **26**, 411
Chasing Sunraycer Across Australia, S.F. Brown, *Popular Science*, Feb. 1988—Robert F. Neff; **26**, 316
The Chernobyl Disaster, D.R. Marples, *Current History*, Oct. 1987—Mary Ethel Parrott; **26**, 316
Collisions between Spinning Protons, A.D. Krisch, *Sci. Am.*, Aug. 1987—Stephen Brusca; **26**, 192
Dark Time, R. Preston, *New Yorker*, Oct. **26**, 1987—Raleigh Ellisen; **26**, 411
The Discovery of a Class of High—Temperature Superconductors, K.A. Muller and J.G. Bednorz, *Science*, Sept. 4, 1987—John L. Roeder; **26**, 411
Do—it—yourself superconductors, P.Grant, *New Scientist*, July 30, 1987—K.R. Evans; **26**, 127
Doc Edgerton: The Man Who Made Time Stand Still, E. Zwingle, *National Geographic*, Oct. 1987—Robert Gardner; **26**, 127
Halley Watch from Easter Island, W. Liller, *Mercury*, Sept./Oct. 1987—Lora Wilhite; **26**, 316
The Jupiter—Io Connection: An Alfven Engine in Space, J.W. Belcher, *Science*, 238, 1987—John L. Roeder; **26**, 127
Letter From The Space Center, H.S.F. Cooper, *New Yorker*, June 8, 1987—Raleigh Ellisen; **26**, 127
Little Caltech's Big Reputation, J. Ellis, *Smithsonian*, Sept. 1987—Mary Ethel Parrott; **26**, 127
Martian Meteorites, R.A. Kerr, *Science*, 237, pp. 721—723—John L. Roeder; **26**, 411
Mass Extinctions Caused by Large Bolide Impacts, L.W. Alvarez, *Physics Today*, July 1987—William D. Foland; **26**, 192
Mathematics Education: A Predictor of Scientific Competitiveness, L.A. Steen, *Science*, 237, 1987—Martha C. Takats; **26**, 127
The Nuclear Reactor Accident at Chernobyl, U.S.S.R., B.L. Cohen, *Am. J. Phys.*, Dec. 1987—Albert A. Bartlett; **26**, 316
Perspectives on Science—Technology—Society Instruction, P. Rubba, *School Science and Mathematics*, March 1987—Robert Hetzel; **26**, 192
Quantum Physics' World: Now You See It, Now You Don't, J. Trefil, *Smithsonian*, Aug. 1987—Mary Ethel Parrott; **26**, 192
Teaching Problem Solving in Mathematics and Science with expert Systems, R. Lippert, *School Science and Mathematics*, Oct. 1987—Robert Hetzel; **26**, 316
Teaching Reasoning, R.E. Nisbett, G.T. Fong, D.R. Lehman and P.W. Cheng, *Science*, Oct. 30, 1987—John L. Roeder; **26**, 316
A Visit to Chernobyl, R. Wilson, *Science*, June **26**, 1987—John L. Roeder; **26**, 127
A Younger Universe is Seen in the Stars, M.M. Waldrop, *Science*, July 24, 1987—John L. Roeder; **26**, 192

TPT DEPARTMENT; HOW THINGS WORK

The Doppler Ball: A Novel Use of the Piezo—Electric Effect—H. Richard Crane; **26**, 120
Help for Forgetful Car Owners and Lazy Yo—yo Throwers—H. Richard Crane; **26**, 240
How to Rotate a Ball from the Inside—H. Richard Crane; **26**, 174
Looking Backward and Forward—Start of a New Year—H. Richard Crane; **26**, 409

A Magnetic Compass with No Moving Parts—H. Richard Crane; **26**, 53
What Can a Dimple Do for a Skipping Stone?—H. Richard Crane; **26**, 300

TPT DEPARTMENT; IN MY OPINION

Physics Laboratory Reports in the Community College Setting—N.K. Preston; **26**, 588
Science and Math Education in the Public Schools—Amalie Frischnecht; **26**, 311
Teaching Physics in Inner City Schools—Stewart E. Brekke; **26**, 110
What Name Should Be Used for the Force Required to Move a Mass in a Circle?—Marvin L. DeJong; **26**, 470

TPT DEPARTMENT; LETTERS TO THE EDITOR

106 Decibels!—Thomas D. Rossing; **26**, 264
An Alternate Brush Material for Electrostatic Generators—B. Huner; **26**, 265
Amusement Park Physics—Barbara Wolff; **26**, 555
But First Get It Right!—Robert Weinstock; **26**, 7
Clouds and Nuggets—Kenneth W. Ford; **26**, 9
Computer Simulation Concerns—Andre Mirabelli; **26**, 200
Dissectible Capacitor Discussed—Mario Iona; **26**, 9
The Doppler Effect and Racing Cars—Thomas D. Rossing; **26**, 423
Editor's Note to What a Jerk!—Jack Willis; **26**, 423
Electricity Defined—Bruce Morgan; **26**, 136
Fly Physics—Robert P. Bauman; **26**, 328
Further Physics of Aircraft Flight—Michael Monce; **26**, 202
Generator Efficiency—Mario Iona; **26**, 555
Least Squares of What?—Mario Iona; **26**, 201
The Leinoff Principal—Stuart Leinoff; **26**, 424
Licensed to...—Donald Maloney; **26**, 136
Linear Regression—A.H. Kalantar; **26**, 328
Maximum Power Transfer vs. Efficiency—Mark A. Heald; **26**, 10
A Modest Proposal—Emory Kimbrough; **26**, 491
More On Toy Airplanes—Bill Franklin; **26**, 264
More on Kicking a Football—A. Tan; **26**, 200
More on Marshmallows—Ken Framme; **26**, 491
More on Skiers Leaning Forward—F.P. Gram; **26**, 71
More on the Angular Momentum Air Top—Robert A. Morse; **26**, 7
More on the Inverted Glass—George W. Ficken, Jr.; **26**, 491
New Mnemonics—Linda J. Kelsey; **26**, 72
No Cement Needed!—D. Nachtigall; **26**, 200
On the Shoulders of Giants—Robert Weinstock; **26**, 264
Physics, Naturally—Donald F. Holcomb; **26**, 265
Pulling Your Cups Apart—Donald E. Shult; **26**, 424
Red Hot—Mario Iona; **26**, 265
Reindeer Physics—Robert Morgan; **26**, 555

Resistor Mnemonics—Francis T. Worrell; **26**, 329
Response to Clouds and Nuggets C. Gregory Hood; **26**, 9
Response to Dissectible Capacitor Discussed—G. Bradley Huff; **26**, 10
Response to Electricity Defined—William J. Beaty; **26**, 136
Response to Fly Physics—D. Easton; **26**, 329
Response to Least Squares of What?—Ernest Zebrowski, Jr. and Leo Takahashi; **26**, 201
Response to Linear Regression—Ernest Zebrowski, Jr. and Leo. Takahashi; **26**, 328
Response to More on Kicking a Football—Peter J. Brancazio; **26**, 200
Response to Weight vs. Mass—William Hooper; **26**, 8
Response to Weightlessness and Microgravity—Larry McGowan; **26**, 72
Response to Why Do Skiers Lean Forward (or Backward)? and More on Skiers Leaning Forward—Albert A. Bartlett and Paul G. Hewitt; **26**, 71
A Steamy Experiment—Paul G. Hewitt; **26**, 491
Up—to—Date Astronomy Revisited—Jay M. Pasachoff; **26**, 424
Updating Physics—B. Hansson; **26**, 491
A Versatile Prism—E. Scott Barr; **26**, 8
Weight vs. Mass—Round I—Robert Chasnov; **26**, 8
Weight vs. Mass—Round II—Carl T. Rutledge; **26**, 8
Weightlessness and Microgravity—Mario Iona; **26**, 72
What a Jerk!—Stephen Luzader; **26**, 423
Why Do Skiers Lean Forward (or Backward)?—Thomas D. Rossing; **26**, 71

TPT DEPARTMENT; 19th CENTURY TEXTBOOK ILLUSTRATIONS

Hare's Apparatus—Thomas B. Greenslade, Jr.; **26**, 26

TPT DEPARTMENT; PHYSICS PROBLEMS

Electromagnetism Problems—Steve Van Wyk; **26**, 115
Ocean Physics Problems—Steve Van Wyk; **26**, 243
Relativity Problems—Steve Van Wyk; **26**, 177

TPT DEPARTMENT; QUESTIONS STUDENTS ASK

Beta Decay—Kenneth Hartt; **26**, 471

TPT DEPARTMENT; SI NOTES

Star Wars Goes Metric—William Hooper; **26**, 307

TPT DEPARTMENT; STRING AND STICKY TAPE

Coefficient of Restitution—Ronald D. Edge; **26**, 540
Rotational Inertia—Bill Reid; **26**, 405
A Siphon Demonstration—Ronald D. Edge; **26**, 114
Surface Tension—Ronald D. Edge; **26**, 586
The Two—Cent Turbine or Magic Millwheel—Ronald D. Edge; **26**, 468

TPT DEPARTMENT; THE TPT FAMILY

TPT Editorial Board Member—Janet B. Guernsey; **26**, 56

TPT DEPARTMENT; WOULD YOU BELIEVE?

Is That Sound Physics?—Robert Baumbach; **26**, 306
More Errors in Revised Editions—Mario Iona; **26**, 126
Questions and Answers—Mario Iona; **26**, 406
Science for Teachers—Mario Iona; **26**, 467
Thermodynamics for Elementary Teachers—Mario Iona; **26**, 537

ERRORS IN PHYSICS CLASSROOM MATERIALS

Is That Sound Physics?—Robert Baumbach; **26**, 306
Physics in Elementary School Textbooks—Marvin L. DeJong; **26**, 218

TEXTBOOKS FOR UNDERGRADUATES

The One-Year, Non-Calculus Physics Course: An Update—Simon George; **26**, 231

TEXTBOOKS FOR STUDENTS IN GRADES K–8

Physics in Elementary School Textbooks—Marvin L. DeJong; **26**, 218

COURSE DESIGN AND EVALUATION

The One-Year, Non-Calculus Physics Course: An Update—Simon George; **26**, 231
Teaching Physics and Feeling Good About It—Charles F. Prokop; **26**, 574
Topical Organization of the Introductory Physics Course—Thomas D. Rossing; **26**, 282

SCIENCE IN ELEMENTARY SCHOOL

Science for Teachers—Mario Iona; **26**, 467
Thermodynamics for Elementary Teachers—Mario Iona; **26**, 537

SCIENCE IN SECONDARY SCHOOL

Determining the Effect of Tire Pressure on Rolling Resistance—Robert A. Morse; **26**, 225
Distinguishing Fact from Explanation Is Not Always Easy—Douglas R. Martin; **26**, 222
Physics at the Indy 500—Chris Buethe and Dick Simon; **26**, 274 *
Questions and Answers—Mario Iona; **26**, 406
Science and Math Education in the Public Schools—Amalie Frischnecht; **26**, 311
Students Preconceptions about Vector Kinematics—Jose M. Aguirre; **26**, 212
Teaching Physics and Feeling Good About It—Charles F. Prokop; **26**, 574
What Do You Do the First Day of Physics Class?—Yvette A. Van Hise and Thomas Phillips; **26**, 291
Why Take Physics in High School—Why Plan to Teach Physics?—William Toews; **26**, 458

CURRICULA AND EVALUATIONS

The One Year, Non-Calculus Physics Course: An Update—Simon George; **26**, 231
Why Take Physics in High School—Why Plan to Teach Physics?—William Toews; **26**, 458

TEACHING METHODS AND STRATEGIES

The Art of Performing Lecture Demonstrations—K.R. Evans; **26**, 242
Coaching Physics—Horace (Rog) Lucido; **26**, 333
Dot Products And Great-Circle Distances—B. Cameron Reed; **26**, 280
Encouraging Critical Thought: Alternative Problem Forms—Douglas R. Martin; **26**, 288
Galileo's Argument on Free Fall—Ian A. Wereley; **26**, 394
Honesty Is the Best Policy—Exponentially!—Albert A. Bartlett; **26**, 506
Mass is Not Destroyed—D. Easton; **26**, 230
Operation "Physicswitch"—David Gewanter and Paul Hickman; **26**, 569
A Physics Time Line—Alex C. Neubert; **26**, 165
Physics in the Logo: The 1986 Bolder Boulder—Albert A. Bartlett; **26**, 293
Putting the Heart before the Course—Humor in Physics Teaching—John W. Jewett, Jr.; **26**, 182
Structured Problem Solving in Kinematics—Ray G. Van Ausdal; **26**, 518
Teaching Physics and Feeling Good About It—Charles F. Prokop; **26**, 574
A Thanksgiving Turkey Shoot—Physics Style—Douglas C. Jenkins; **26**, 516
Unlocking the Confusing World of Rotation—Fred B. Otto; **26**, 382
Using Automobile Road Test Data—Eugene E. Nalence; **26**, 278
What Do You Do the First Day of Physics Class?—Yvette A. Van Hise and Thomas Phillips; **26**, 291
What Name Should Be Used for the Force Required to Move a Mass in a Circle?—Marvin L. DeJong; **26**, 470
Why Take Physics in High School—Why Plan to Teach Physics?—William Toews; **26**, 458

LEARNING THEORY AND SCIENCE TEACHING

Coaching Physics—Horace Rog Lucido; **26**, 333
Peer Perspectives on Physics—Sheila Tobias; **26**, 77
Student Misconceptions in Mechanics: An International Problem?—Yvette A. Van Hise; **26**, 498
Students Preconceptions about Vector Kinematics—Jose M. Aguirre; **26**, 212
The View From Mimas—Carl C. Fields; **26**, 207

AUDIO AND VISUAL AIDS, FILMS, ELECTRONIC VIDEO DEVICES

Astronomy: Comets—William Luzader; **26**, 585
Career Video—Mary Ethel Parrott; **26**, 466
A Modern Galileo—John L. Roeder; **26**, 404
A Question for the Speaker—Jack Willis; **26**, 463
Television Experiments—Larry D. Kirkpatrick; **26**, 541
Viewing Vertical Objects with an Overhead Projector—R.L. Wild; **26**, 572

OTHER INSTRUCTIONAL AIDS; POSTERS, CARTOONS, ART, ETC.

Electric Circuit—Paul G. Hewitt; **26**, 313
Falling in Air—Paul G. Hewitt; **26**, 117
Ferromagnetism and the Secret Agent—Guy Faucher; **26**, 30
Fundamental Particles and Interactions—A Wall Chart of Modern Physics—Fundamental Particles and Interactions Chart Committee; **26**, 556
The Helium—Filled Balloon will...?—Paul G. Hewitt; **26**, 179
Icecraft with Fan—Paul G. Hewitt; **26**, 57
Lamp Efficiency—Paul G. Hewitt; **26**, 247
Magnetic Tack—Paul G. Hewitt; **26**, 593
Moving Molecules—Paul G. Hewitt; **26**, 473
Photo-Icicle Pattern on a Rotating Wheel—J. Wallingford; **26**, 399
Skidding—Paul G. Hewitt; **26**, 543
Tutorial Slides for the Tektronix 2213 Oscilloscope—Charles D. Teague; **26**, 525

INSTRUCTIONAL COMPUTER USE, CLASSROOM

Suggested Courseware for the Non-Calculus Physics Student: Measurement, Vectors, and One-Dimensional Motion—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 437
Suggested Courseware for the Non-Calculus Physics Student: Newton's Laws, Energy, and Momentum—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 511
Suggested Courseware for the Non-Calculus Physics Student: Projectile Motion, Circular Motion, Rotational Dynamics, and Statics—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 567

INSTRUCTIONAL COMPUTER USE, LABORATORY

Computerized Pre-checking of Laboratory Data—David Harrison and John M. Pitre; **26**, 156
A Method of Recording Rotational Motion on a Conventional Air Table—Neves Pereira and Stuart M. Quick; **26**, 170

Projectile Motion with the Turtle—George Oleh Kolodiy; **26**, 374

COMPUTER SOFTWARE AND SOFTWARE REVIEWS

Educational Materials and Equipment Company: *Collisions and Simple Harmonic Motion*—LeVonda S. Ritchie and John S. Risley; **26**, 302
Projectile Motion with the Turtle—George Oleh Kolodiy; **26**, 374
Suggested Courseware for the Non-Calculus Physics Student: Measurement, Vectors, and One-Dimensional Motion—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 437
Suggested Courseware for the Non-Calculus Physics Student: Newton's Laws, Energy, and Momentum—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 511
Suggested Courseware for the Non-Calculus Physics Student: Projectile Motion, Circular Motion, Rotational Dynamics, and Statics—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 567

TESTING THEORY AND TECHNIQUES

Distinguishing Fact from Explanation Is Not Always Easy—Douglas R. Martin; **26**, 222
Writing Better Physics Exams—James H. Stith and Alfred G. Costantine; **26**, 138

DEMONSTRATION EXPERIMENTS AND APPARATUS

The "Ting-a-Ling" Machine—Clifford Bettis; **26**, 304
The Art of Performing Lecture Demonstrations—K.R. Evans; **26**, 242
Ban™ Deodorant Ball Mortar—D. Rae Carpenter, Jr., David J. Rehbein, and Robert J. Bonometti; **26**, 522
Bubble Maker Interference—Earl Zwicker and Peter Insley; **26**, 184
Chain Reaction Model—Robert Marzewski; **26**, 514
Color Mixing Using a Single Projector—Marinus G. Luttikhuizen; **26**, 296
Composite Samples for an Archimedes' Principle Experiment—C. Guerra-Vela and D.J. Bord; **26**, 95
Coupled Systems with Constrained Accelerations—John M. Sherfinski; **26**, 454
Demonstration of the Thermal Expansion of Solids—S.K. Chakarvarti; **26**, 400
A Demonstration to Show the Upthrust Exerted by Air—Zhu E—Qing; **26**, 401
Dynamical Balance and the Rotating Rod—A Personal Demonstration—Clifton Bob Clark and Stuart Thompson; **26**, 237
Finding Magnetic North the Hard Way—Daniel L. Timmons; **26**, 276
Flying Halloween Witch—Earl Zwicker and Peter Insley; **26**, 476
Frames of Reference—Earl Zwicker and Scott Welty; **26**, 245
A Frankenstein Demonstration with the Van De Graaff Generator—James G. Ellingson; **26**, 446
The Genecon Hand-Operated Generator—-Chris Chiaverina; **26**, 41
Hare's Apparatus—Thomas B. Greenslade, Jr.; **26**, 26
Ice and Balls—Carol L. Miles; **26**, 536
Illustrating Newton's Second Law with the Automobile Coast-Down Test—Ronald A. Bryan, Robert Beck Clark and Pat Sadberry; **26**, 442
An Inexpensive Acoustic Trigger for Dramatic Flash Photographs—Arthur B. Western and J.H. Archibald; **26**, 464
An Interactive Soap Film Apparatus—Chris Chiaverina; **26**, 238
Ladder Physics—Earl Zwicker and Joe Meyer; **26**, 532
Liquid Beans—Robert B. Prigo; **26**, 101
A Mechanical Lattice Aid for Crystallography Teaching—J. Amezcua-Lopez and A.E. Cordero-Borboa; **26**, 384
Model of Astigmatism—Mark Riegel and Brian Holmes; **26**, 96
The Most Obvious Explanation Is Not Always Correct—H.T. Hudson; **26**, 34
The Motion of a Point in a Rigid Body on a Horizontal Plane—Duan Jihui and Charles T.P. Wang; **26**, 575
A New Look for Coriolis—F.A. Levi; **26**, 508
Newton and the Apples—Terrence P. Toepker; **26**, 165
Newton's Laws with Jumping Disks—Earl Zwicker and Ed McNeil; **26**, 308
Physics at the Fire Station—Jukka O. Mattila; **26**, 440
Radioactive Decay—An Analog—Frank McGeachy; **26**, 28
Rotational Motion Demonstrator—Everette E. Tompkins; **26**, 187
Simple Vibrating Systems—Thomas D. Rossing; **26**, 50
Simulating Optical Fibers—Dale Edgar; **26**, 504
Skiing Revisited—To Lean Or Not To Lean?—Philip W. Gronseth and Marc R. Hallada; **26**, 584
Standing Waves and Beats Displayed by Foam Packing—Thomas B., Jr. Greenslade; **26**, 396
Standing Waves in a Styrofoam Cup—David Keeports; **26**, 456
Surface Tension—Ronald D. Edge; **26**, 586
Taking a Random Walk on TV—Haym Kruglak; **26**, 157
A Thanksgiving Turkey Shoot—Physics Style—Douglas C. Jenkins; **26**, 516
Viewing Vertical Objects with an Overhead Projector—R.L. Wild; **26**, 572
Visualization of the Ideal Gas Equation—J. Hellemans; **26**, 398
The Wheel and the Galilean Transformation—Roger Blickensderfer; **26**, 160
Who Will Win the Race?—Robert H. March; **26**, 297

LABORATORY EXPERIMENTS AND APPARATUS

The Bobbing Buoy—J. Casey; **26**, 33
Coefficient of Restitution—Ronald D. Edge; **26**, 540
Coloration on a String Vibrating in a Standing Wave Pattern—Parshotam D. Gupta; **26**, 371
Determining the Effect of Tire Pressure on Rolling Resistance—Robert A. Morse; **26**, 225
Experiments with Disposable Hypodermic Syringes—G.T. Clayton, T.O. Callaway, and H.D. Downing; **26**, 19
A Fast and Accurate Technique with the Prism Spectrometer—T.A. McMath and Mario Glavacic; **26**, 461
Interference and Polarized Light—Seymour Charas; **26**, 570
Is the Extrapolation Linear?—John F. Goehl, Jr.; **26**, 105
Measurement of Self-Inductance—S.Y. Mak and P.K. Tao; **26**, 378
Measurement of a Thermodynamic Constant—Aaron McAlexander; **26**, 235
Measuring Capacitance and the Dielectric Constant—Ellis D. Noll; **26**, 169
A Method of Recording Rotational Motion on a Conventional Air Table—Neves Pereira and Stuart M. Quick; **26**, 170
A Photogate Design for Air Track Experiments—P.F. Hinrichsen; **26**, 42
The Physics of an Exercise Bike—Gaylord T. Hageseth; **26**, 226
Pre-Newtonian Holograms or How to Make Holograms...—Thomas C. Altman; **26**, 223

A Simple Method to Determine the Refractive Index of Glass—Se-yuen Mak; **26**, 526
Simulating Optical Fibers—Dale Edgar; **26**, 504
Spin—Out Velocity of a Slot Car—Dennis P. Zicko; **26**, 452
Standing Waves in a Styrofoam Cup—David Keeports; **26**, 456
Taking a Random Walk on TV—Haym Kruglak; **26**, 157
Unlocking the Confusing World of Rotation—Fred B. Otto; **26**, 382

LABORATORY COURSE DESIGN, ORGANIZATION, AND EVALUATION

Physics Laboratory Reports in the Community College Setting—N.K. Preston; **26**, 588
Tutorial Slides for the Tektronix 2213 Oscilloscope—Charles D. Teague; **26**, 525

PHYSICS GAMES AND CONTESTS

An Arithmetical Puzzle—George Barnes; **26**, 27
Physics Students' Day at Six Flags/Magic Mountain,—John McGehee; **26**, 12 *
Quantum Frog Race—Robert Marzewski and Paul Hickman; **26**, 514
Setting A Mousetrap—Peter Levan; **26**, 32
A Thanksgiving Turkey Shoot—Physics Style—Douglas C. Jenkins; **26**, 516
What Can a Dimple Do for a Skipping Stone?—H. Richard Crane; **26**, 300

GENERAL PHYSICS

Illustrating Newton's Second Law with the Automobile Coast—Down Test—Ronald A. Bryan, Robert Beck Clark, and Pat Sadberry; **26**, 442
Is That Sound Physics?—Robert Baumbach; **26**, 306
One Mole of Dollars—Albert A. Bartlett; **26**, 98
Questions and Answers—Mario Iona; **26**, 406
Science for Teachers—Mario Iona; **26**, 467
Topical Organization of the Introductory Physics Course—Thomas D. Rossing; **26**, 282
What Name Should Be Used for the Force Required to Move a Mass in a Circle?—Marvin L. DeJong; **26**, 470

BIOGRAPHICAL, HISTORICAL, AND PERSONAL NOTES

1988 Oersted Medal—Norman F. Ramsey; **26**, 204
Hertz and the Discovery of Radio Waves and the Photoelectric Effect—Joseph L. Spradley; **26**, 492
L.R. Wilberforce and the Wilberforce Pendulum—Robert J. Whitaker; **26**, 37
Meet Your New AAPT President: Robert Resnick—Arnold A. Strassenburg; **26**, 74
TPT Family—Janet B. Guernsey; **26**, 56

HISTORY OF SCIENCE

A Brief Etymology of Words Used in Physics—George W. Goth; **26**, 576
Eratosthenes Revisited—Jerry Webb and Roberta Bustin; **26**, 154
Galileo's Argument on Free Fall—Ian A. Wereley; **26**, 394
Hare's Apparatus—Thomas B. Greenslade, Jr.; **26**, 26
Hertz and the Discovery of Radio Waves and the Photoelectric Effect—Joseph L. Spradley; **26**, 492
Max Planck's Natural Units—Robert L. Wadlinger and Geoffrey Hunter; **26**, 528
My Rediscovery of Inexpensive, Universal Timing Instruments—Vincent S. Steckline; **26**, 285
A Physical Fountain—Ronald D. Edge; **26**, 294
A Physics Time Line—Alex C. Neubert; **26**, 165
The Rainbow and the Achromatic Telescope: Two Case Studies—M. Eugene Rudd; **26**, 82

SCIENCE AND SOCIETY

Balancing a Tilting Canal Bridge—George W. Ficken, Jr.; **26**, 510
Honesty Is the Best Policy—Exponentially!—Albert A. Bartlett; **26**, 506
The Science of Traffic Safety—Leonard Evans; **26**, 426
Star Wars Goes Metric—William Hooper; **26**, 307

PHYSICS OF GAMES AND SPORTS

Olympic Wrestling and Angular Momentum—Mark Carle; **26**, 92
Physics at the Indy 500—Chris Buethe and Dick Simon; **26**, 274 *
Physics in the Logo: The 1986 Bolder Boulder—Albert A. Bartlett; **26**, 293
The Racing Car Turn—Richard A.D. Hewko; **26**, 436

CAREERS IN PHYSICS AND SCIENCE

Career Video—Mary Ethel Parrott; **26**, 466

OTHER TOPICS OF GENERAL INTEREST

Acceleration from the Energy Function Derivative—John M. Sherfinski; **26**, 228
An Arithmetical Puzzle—George Barnes; **26**, 27
A Brief Etymology of Words Used in Physics—George W. Goth; **26**, 576
Distinguishing Fact from Explanation Is Not Always Easy—Douglas R. Martin; **26**, 222
Honesty Is the Best Policy—Exponentially!—Albert A. Bartlett; **26**, 506
Murphy's Law or Jelly—Side Down—Ronald D. Edge; **26**, 392
One Mole of Dollars—Albert A. Bartlett; **26**, 98
Operation "Physicswitch"—David Gewanter and Paul Hickman; **26**, 569
A Physical Fountain—Ronald D. Edge; **26**, 294
Physics and the Measurement of Automobile Performance—Albert A. Bartlett; **26**, 433
A Question for the Speaker—Jack Willis; **26**, 463
The Science of Traffic Safety—Leonard Evans; **26**, 426
Solar Radiation and the Earth's Atmosphere—William R. Kuhn and Susan E. Postawko; **26**, 266
Trace Gases, CO_2, Climate, and the Greenhouse Effect—Gordon J. Aubrecht, II; **26**, 145#
Ubiquitous Geometry—Some Examples Showing the Significance of Size and Shape in the Works of Man and Nature—Charles H. Bachman; **26**, 341
Using Automobile Road Test Data—Eugene E. Nalence; **26**, 278

MATHEMATICAL METHODS IN PHYSICS

Achilles and the Tortoise—Frederic R. Stauffer; **26**, 36
Dot Products And Great-Circle Distances—B. Cameron Reed; **26**, 280
An Intriguing Problem in Equivalent Resistance—Bernard Scott; **26**, 578
Parallel Circuits and Probability—James N. Boyd; **26**, 106

CLASSICAL AND QUANTUM PHYSICS: MECHANICS AND FIELDS

Frames of Reference—Earl Zwicker and Scott Welty; **26**, 245
Mass Is Not Destroyed—D. Easton; **26**, 230
Relativity Problems—Steve Van Wyk; **26**, 177
The View from Mimas—Carl C. Fields; **26**, 207

GENERAL RELATIVITY AND GRAVITATION

Does a Photon Gas Obey the Law of Atmospheres?—Warren Hirsch and Vojtech Fried; **26**, 100

MEASUREMENT SCIENCE, GENERAL LABORATORY TECHNIQUES, AND INSTRUMENTATION SYSTEMS

Broderbund Software: *Science Toolkit Master Module and Module1—Speed and Motion*—Robert A. Cline and John S. Risley; **26**, 111
Composite Samples for an Archimedes' Principle Experiment—C. Guerra-Vela and D.J. Bord; **26**, 95
Computerized Pre-checking of Laboratory Data—David Harrison and John M. Pitre; **26**, 156
Doppler Shift Viewed as a Result of Variable Delay—Glenn A. Myers; 26, 284
Eratosthenes Revisited—Jerry Webb and Roberta Bustin; **26**, 154
Max Planck's Natural Units—Robert L. Wadlinger and Geoffrey Hunter; **26**, 528
Measurement of Self-Inductance—S.Y. Mak and P.K. Tao; **26**, 378
Measuring Capacitance and the Dielectric Constant—Ellis D. Noll; **26**, 169
My Rediscovery of Inexpensive, Universal Timing Instruments—Vincent S. Steckline; **26**, 285
Star Wars Goes Metric—William Hooper; **26**, 307
Suggested Courseware for the Non-Calculus Physics Student: Measurement, Vectors, and One-Dimensional Motion—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 437
Taking a Random Walk on TV—Haym Kruglak; **26**, 157

SPECIFIC INSTRUMENTATION AND TECHNIQUES OF GENERAL USE IN PHYSICS

Broderbund Software: *Science Toolkit Master Module and Module1—Speed and Motion*—Robert A. Cline and John S. Risley; **26**, 111
A Comparison of Sonic Rangers for Demonstrations and Experiments in Mechanics—Robert A. Cline and John S. Risley; **26**, 46
A Fast and Accurate Technique with the Prism Spectrometer—T.A. McMath and Mario Glavacic; **26**, 461
Should the Prism Be Well Centered?—Carol Ouellet; **26**, 162

THE PHYSICS OF ELEMENTARY PARTICLES AND FIELDS

Fundamental Particles and Interactions—A Wall Chart of Modern Physics—The Fundamental Particles and Interactions Chart Committee; **26**, 556
Science and Math Education in the Public Schools—Amalie Frischnecht; **26**, 311

NUCLEAR PHYSICS

Beta Decay—Kenneth Hartt; **26**, 471
Chain Reaction Model—Robert Marzewski; **26**, 514
Radioactive Decay—An Analog—Frank McGeachy; **26**, 28

ATOMIC AND MOLECULAR PHYSICS

A Mechanical Lattice Aid for Crystallography Teaching—J. Amezcua-López and A.E. Cordero-Borboa; **26**, 384
Ocean Physics Problems—Steve Van Wyk; **26**, 243

ELECTRICITY AND MAGNETISM

The "Ting-a-Ling" Machine—Clifford Bettis; **26**, 304
Electric Circuit—Paul G. Hewitt; **26**, 313
Ferromagnetism and the Secret Agent—Guy Faucher; **26**, 30
Finding Magnetic North the Hard Way—Daniel L. Timmons; **26**, 276
A Frankenstein Demonstration with the Van De Graaff Generator—James G. Ellingson; **26**, 446
Hertz and the Discovery of Radio Waves and the Photoelectric Effect—Joseph L. Spradley; **26**, 492
An Intriguing Problem in Equivalent Resistance—Bernard Scott; **26**, 578
Lemon Screamer—Earl Zwicker and James Szeszol; **26**, 60
A Magnetic Compass with No Moving Parts—H. Richard Crane; **26**, 53
Measurement of Self-Inductance—S.Y. Mak and P.K. Tao; **26**, 378
A Myth about Capacitors in Series—Ludwik Kowalski; **26**, 286
Parallel Circuits and Probability—James N. Boyd; **26**, 106

OPTICS

Bubble Maker Interference—Earl Zwicker and Peter Insley; **26**, 184
Color Mixing Using a Single Projector—Marinus G. Luttikhuizen; **26**, 296
Coloration on a String Vibrating in a Standing Wave Pattern—Parshotam D. Gupta; **26**, 371
A Convex Lens as a Thick Mirror—Robert Krohl; **26**, 18
A Fast and Accurate Technique with the Prism Spectrometer—T.A. McMath and Mario Glavacic; **26**, 461
Flying Halloween Witch—Earl Zwicker and Peter Insley; **26**, 476
An Interactive Soap Film Apparatus—Chris Chiaverina; **26**, 238
Interference and Polarized Light—Seymour Charas; **26**, 570
Is the Extrapolation Linear?—John F. Goehl, Jr.; **26**, 105
Model of Astigmatism—Mark Riegel and Brian Holmes; **26**, 96
Optical Fiber Communications—Carl Throckmorton and Joe Dey; **26**, 530
Pre-Newtonian Holograms or How to Make Holograms...—Thomas C. Altman; **26**, 223
The Rainbow and the Achromatic Telescope: Two Case Studies—M. Eugene Rudd; **26**, 82
Red Shifts with Obliquely Approaching Light Sources—C.E. Head and M.E. Moore-Head; **26**, 102
Should the Prism Be Well Centered?—Carol Ouellet; **26**, 162
A Simple Method to Determine the Refractive Index of Glass—Se-yuen Mak; **26**, 526
Simulating Optical Fibers—Dale Edgar; **26**, 504
The Sloooow Camera—Charlotte T. Farrell; **26**, 581

ACOUSTICS

An Inexpensive Acoustic Trigger for Dramatic Flash Photographs—Arthur B. Western and J.H. Archibald; **26**, 464

HEAT FLOW, THERMAL AND THERMODYNAMIC PROCESSES

Ice and Balls—Carol L. Miles; **26**, 536

Measurement of a Thermodynamic Constant—Aaron McAlexander; **26**, 235
Physics at the Fire Station—Jukka O. Mattila; **26**, 440
Thermodynamics for Elementary Teachers—Mario Iona; **26**, 537
Trace Gases, CO_2, Climate, and the Greenhouse Effect—Gordon J. Aubrecht, II; **26**, 145#
Visualization of the Ideal Gas Equation—J. Hellemans; **26**, 398

MECHANICS, ELASTICITY, RHEOLOGY

Acceleration from the Energy Function Derivative—John M. Sherfinski; **26**, 228
Achilles and the Tortoise—Frederic R. Stauffer; **26**, 36
Balancing a Tilting Canal Bridge—George W. Ficken, Jr.; **26**, 510
Ban™ Deodorant Ball Mortar—D. Rae Carpenter, Jr., David J. Rehbein and Robert J. Bonometti; **26**, 522
Coefficient of Restitution—Ronald D. Edge; **26**, 540
A Comparison of Sonic Rangers for Demonstrations and Experiments in Mechanics—Robert A. Cline and John S. Risley; **26**, 46
Coupled Systems with Constrained Accelerations—John M. Sherfinski; **26**, 454
Determining the Effect of Tire Pressure on Rolling Resistance—Robert A. Morse; **26**, 225
Dynamical Balance and the Rotating Rod—A Personal Demonstration—Clifton Bob Clark and Stuart Thompson; **26**, 237
Essay on Gyroscopic Motions—Peter L. Tea, Jr.; **26**, 22
Falling in Air—Paul G. Hewitt; **26**, 117

Galileo's Argument on Free Fall—Ian A. Wereley; **26**, 394
The Helium-Filled Balloon Will...?—Paul G. Hewitt; **26**, 179
Help for Forgetful Car Owners and Lazy Yo-Yo Throwers—H. Richard Crane; **26**, 240
How to Rotate a Ball from the Inside—H. Richard Crane; **26**, 174
Icecraft With Fan—Paul G. Hewitt; **26**, 57
Ladder Physics—Earl Zwicker and Joe Meyer; **26**, 532
Magnetic Tack—Paul G. Hewitt; **26**, 593
Mass Is Not Destroyed—D. Easton; **26**, 230
A Method of Recording Rotational Motion on a Conventional Air Table—Neves Pereira and Stuart M. Quick; **26**, 170
The Most Obvious Explanation Is Not Always Correct—H.T. Hudson; **26**, 34
The Motion of a Point in a Rigid Body on a Horizontal Plane—Duan Jihui and Charles T.P. Wang; **26**, 575
Murphy's Law or Jelly-Side Down—Ronald D. Edge; **26**, 392
A New Look for Coriolis—F.A. Levi; **26**, 508
Newton and the Apples—Terrence P. Toepker; **26**, 165
Newton's Laws with Jumping Disks—Earl Zwicker and Ed McNeil; **26**, 308
Newton's Truck: Determining Mass and Finding 'g' by Pushing a Truck across a Parking Lot—David L.D. Green and David T. Hartney; **26**, 448

Ocean Physics Problems—Steve Van Wyk; **26**, 243
Olympic Wrestling and Angular Momentum—Mark Carle; **26**, 92
Physics and the Measurement of Automobile Performance—Albert A. Bartlett; **26**, 433
Physics at the Indy 500—Chris Buethe and Dick Simon; **26**, 274 *
Physics in the Logo: The 1986 Bolder Boulder—Albert A. Bartlett; **26**, 293
The Physics of an Exercise Bike—Gaylord T. Hageseth; **26**, 226
Potential Energy Closes Gate—George W. Ficken, Jr.; **26**, 164
Projectile Motion with the Turtle—George Oleh Kolodiy; **26**, 374
The Racing Car Turn—Richard A.D. Hewko; **26**, 436
Rotational Dynamics—Two Fundamental Issues—John M. Sherfinski; **26**, 290
Rotational Motion Demonstrator—Everette E. Tompkins; **26**, 187
The Science of Traffic Safety—Leonard Evans; **26**, 426
Setting A Mousetrap—Peter Levan; **26**, 32
Skidding—Paul G. Hewitt; **26**, 543
Spin-Out Velocity of a Slot Car—Dennis P. Zicko; **26**, 452
Structured Problem Solving in Kinematics—Ray G. Van Ausdal; **26**, 518
Student Misconceptions in Mechanics: An International Problem?—Yvette A. Van Hise; **26**, 498
Students Preconceptions about Vector Kinematics—Jose M. Aguirre; **26**, 212
Suggested Courseware for the Non-Calculus Physics Student: Newton's Laws, Energy, and Momentum—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 511
Suggested Courseware for the Non-Calculus Physics Student: Projectile Motion, Circular Motion, Rotational Dynamics, and Statics—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 567
Timing Projectile Motion—Earl Zwicker and Ann Brandon; **26**, 124
Unlocking the Confusing World of Rotation—Fred B. Otto; **26**, 382
Using Automobile Road Test Data—Eugene E. Nalence; **26**, 278
The View From Mimas—Carl C. Fields; **26**, 207
What Can a Dimple Do for a Skipping Stone?—H. Richard Crane; **26**, 300
What Name Should Be Used for the Force Required to Move a Mass in a Circle?—Marvin L. DeJong; **26**, 470
The Wheel and the Galilean Transformation—Roger Blickensderfer; **26**, 160
Whither Plumb Line?—A. Tan; **26**, 219
Who Will Win the Race?—Robert H. March; **26**, 297

VIBRATIONS AND MECHANICAL WAVES

The Bobbing Buoy—J. Casey; **26**, 33
Bubble Maker Interference—Earl Zwicker and Peter Insley; **26**, 184
Coloration on a String Vibrating in a Standing Wave Pattern—Parshotam D. Gupta; **26**, 371
Doppler Shift Viewed as a Result of Variable Delay—Glenn A. Myers; **26**, 284
Educational Materials and Equipment Company: Collisions and Simple Harmonic Motion—LeVonda S. Ritchie and John S. Risley; **26**, 302
An Interactive Soap Film Apparatus—Chris Chiaverina; **26**, 238
Simple Vibrating Systems—Thomas D. Rossing; **26**, 50
Standing Waves and Beats Displayed by Foam Packing—Thomas B. Greenslade, Jr.; **26**, 396
Standing Waves in a Styrofoam Cup—David Keeports; **26**, 456
Synchronized Swinging—Donald G. Bruns; **26**, 220

FLUID DYNAMICS

Liquid Beans—Robert B. Prigo; **26**, 101
A Physical Fountain—Ronald D. Edge; **26**, 294
The Two-Cent Turbine or Magic Millwheel—Ronald D. Edge; **26**, 468

KINETIC AND TRANSPORT THEORY, AND OTHER PROPERTIES OF FLUIDS

Experiments with Disposable Hypodermic Syringes—G.T. Clayton, T.O. Callaway, and H.D. Downing; **26**, 19
Moving Molecules—Paul G. Hewitt; **26**, 473
Physics at the Fire Station—Jukka O. Mattila; **26**, 440

MECHANICAL AND ACOUSTICAL PROPERTIES OF CONDENSED MATTER

Composite Samples for an Archimedes' Principle Experiment—C. Guerra-Vela and D.J. Bord; **26**, 95
Liquid Beans—Robert B. Prigo; **26**, 101
A Mechanical Lattice Aid for Crystallography Teaching—J. Amezcua-López and A.E. Cordero-Borboa; **26**, 384
Surface Tension—Ronald D. Edge; **26**, 586

THERMAL PROPERTIES OF CONDENSED MATTER

Demonstration of the Thermal Expansion of Solids—S.K. Chakarvarti; **26**, 400

GENERAL TOPICS IN ELECTRICAL AND MAGNETIC DEVICES

Help for Forgetful Car Owners and Lazy Yo-yo Throwers—H. Richard Crane; **26**, 240
A Magnetic Compass with No Moving Parts—H. Richard Crane; **26**, 53
A Myth about Capacitors in Series—Ludwik Kowalski; **26**, 286

AREAS OF GENERAL INTEREST TO PHYSICISTS

Aiming a Satellite Dish—Ernest, Jr. Zebrowski; **26**, 153
Lamp Efficiency—Paul G. Hewitt; **26**, 247
Solar Radiation and the Earth's Atmosphere—William R. Kuhn and Susan E. Postawko; **26**, 266
Trace Gases, CO_2, Climate, and the Greenhouse Effect—Gordon J. Aubrecht, II; **26**, 145#
Ubiquitous Geometry—Some Examples Showing the Significance of Size and Shape in the Works of Man and Nature—Charles H. Bachman; **26**, 341

FUNDAMENTAL ASTRONOMY/ASTROPHYSICS; INSTRUMENTATION, TECHNIQUES, AND ASTRONOMICAL OBSERVATIONS

Aiming a Satellite Dish—Ernest, Zebrowski, Jr.; **26**, 153
Astronomy: Comets—William Luzader; **26**, 585
Red Shifts with Obliquely Approaching Light Sources—C.E. Head and M.E. Moore-Head; **26**, 102
Solar Radiation and the Earth's Atmosphere—William R, Kuhn and Susan E. Postawko; **26**, 266
The View from Mimas—Carl C. Fields; **26**, 207

ERRATA

Atwoods Machine Using Moment of Inertia Pulley—Edward E. Beasley; **25**, 5: 4; **26**, 236

A Morality Tale for Physics Teachers–Clifford E. Swartz; **25**, 154; **26**, 72
Photo-Icicle Pattern on a Rotating Wheel—J. Wallingford; **26**, 399, 535
Saturn's moons identification error; **26**, 265
Seasonal Simulations—Robert D. Smith; **25**, 605; **26**, 10
Swimming Pool Optics, 1987, 88—Haym Kruglak; **25**, 440, **26**, 395
Trace Gases, CO_2, Climate, and the Greenhouse Effect—Gordon J. Aubrecht, II; **26**, 265

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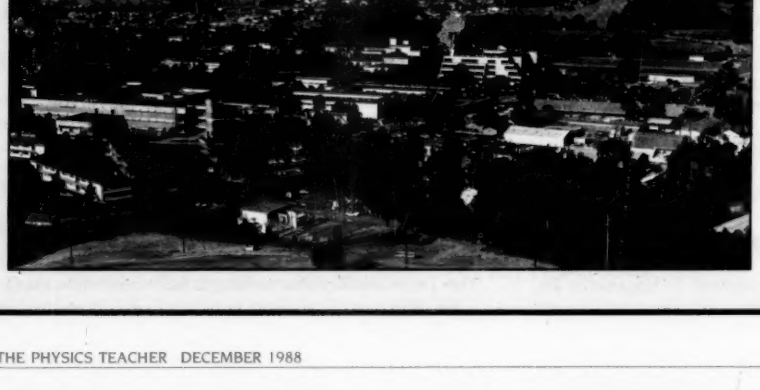

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Author Index—Volume 26

Achor, William T.
—Fundamental Particles and Interactions-A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556
Adelberger, Rexford E.
—Undergraduate Education in Chemistry and Physics, M.R. Rice, Ed., Univ. of Chicago, 1986 (BR); **26**, 317
Aguirre, Jose M.
—Students Preconceptions about Vector Kinematics; **26**, 212
Altman, Thomas C.
—Pre-Newtonian Holograms or How to Make Holograms...; **26**, 223
Amezcua-López, J.
—A Mechanical Lattice Aid for Crystallography Teaching—J. Amezcua-López and A.E. Cordero-Borboa; **26**, 384
Anderes, Clarice D.
—A Skeleton in the Darkroom, G. Shapiro, Harper & Row Pub., Inc., CA, 1986 (BR); **26**, 250
Archibald, J.H.
—An Inexpensive Acoustic Trigger for Dramatic Flash Photographs—A. Western and J.H. Archibald; **26**, 464
Aubrecht, Gordon J., II
—Trace Gases, CO_2, Climate, and the Greenhouse Effect; **26**, 145
—*Beyond the Quantum*, M. Talbot, Macmillan Pub. Co., NY, 1987 (BR); **26**, 253
—Fundamental Particles and Interactions-A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556
Bachman, Charles H.
—Ubiquitous Geometry—Some Examples Showing the Significance of Size and Shape in the Works of Man and Nature; **26**, 341
Baratta, Anthony J.
—Beyond Engineering, H. Petroski, St. Martin's Press, NY, 1986 (BR); **26**, 250
—*To Engineer Is Human—The Role Of Failure In Successful Design*, H. Petroski, St. Martin's Press, NY, 1985 (BR); **26**, 251
—*Technical Physics*, 2nd ed., P.J. Ouseph, John Wiley & Sons, Inc., NJ, 1986 (BR); **26**, 318
Barnes, George
—An Arithmetical Puzzle; **26**, 27
Barnett, R. Michael
—Fundamental Particles and Interactions-A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556
Barr, E. Scott
—A Versatile Prism (L); **26**, 8
Bartlett, Albert A.
—Etcetera; **26**, 52, 125, 176, 249, 298, 412, 475, 545, 590
—Physics in the Logo: The 1986 Bolder Boulder; **26**, 293
—The Nuclear Reactor Accident at Chernobyl, U.S.S.R., B.L. Cohen, *Am. J. Phys.*, Dec. 1987 (GR); **26**, 316
—Physics and the Measurement of Automobile Performance; **26**, 433
—Honesty Is the Best Policy—Exponentially!; **26**, 506
—Response to Why Do Skiers Lean Forward (or Backward)? and More on Skiers Leaning Forward (L)—Albert A. Bartlett and Paul G. Hewitt (L); **26**, 71
—One Mole of Dollars; **26**, 98
Bauman, Robert P.
—*The Forces of Nature*, 2nd ed., P.C.W. Davies, Cambridge Univ. Press, NY, 1986 (BR); **26**, 319
—Fly Physics (L); **26**, 328

Baumbach, Robert
—Is That Sound Physics?; **26**, 306

Beaty, William J.
—Response to Electricity Defined (L); **26**, 136

Beichner, Robert J.
—*Computer Problems for Classical Dynamics: An Integrated Approach*, C. Leming, Harcourt Brace Jovanovich, CA (BR); **26**, 591
Berry, Donna A.
—1988 Distinguished Service Citation; **26**, 204
Bettis, Clifford
—The "Ting-a-Ling" Machine; **26**, 304
Blickensderfer, Roger
—The Wheel and the Galilean Transformation; **26**, 160
Bonometti, Robert J.
—Ban™ Deodorant Ball Mortar—D. Rae Carpenter, Jr., David J. Rehbein, and Robert J. Bonometti; **26**, 522
Bord, D.J.
—Composite Samples for an Archimedes' Principle Experiment—C. Guerra-Vela and D.J. Bord; **26**, 95
Boyd, James N.
—Parallel Circuits and Probability; **26**, 106

Brancazio, Peter J.
—Response to More on Kicking a Football (L); **26**, 200
Brandon, Ann
—Timing Projectile Motion—Earl Zwicker and Ann Brandon; **26**, 124
Brekke, Stewart E.
—Teaching Physics in Inner City Schools; **26**, 110
Bruns, Donald G.
—Synchronized Swinging; **26**, 220
Brusca, Stephen
—Collisions between Spinning Protons, A.D. Krisch, *Sci. Am.*, Aug. 1987 (GR); **26**, 192
Bryan, Ronald A.
—Illustrating Newton's Second Law with the Automobile Coast-Down Test-Ronald A. Bryan, Robert Beck Clark, and Pat Sadberry; **26**, 442

Buethe, Chris
—Physics at the Indy 500—Chris Buethe and Dick Simon; **26**, 274
Bustin, Roberta
—Eratosthenes Revisited—Jerry Webb and Roberta Bustin; **26**, 154
Cadwell, Louis H.
—The Riddle of Gravitation, P.G. Bergmann, Charles Scribner's Sons, NY, 1987 (BR); **26**, 546
Callaway, T.O.
—Experiments with Disposable Hypodermic Syringes—G.T. Clayton, T.O. Callaway, and H.D. Downing; **26**, 19
Carle, Mark
—Olympic Wrestling and Angular Momentum; **26**, 92
Carpenter, D. Rae, Jr.
—1988 Distinguished Service Citation; **26**, 205
—Ban™ Deodorant Ball Mortar—D. Rae Carpenter, Jr., David J. Rehbein, and Robert J. Bonometti; **26**, 522

Casey, J.
—The Bobbing Buoy; **26**, 33
Chakarvarti, S.K.
—De onstration of the Thermal Expansion of Solids; **26**, 400
Charas, Seymour
—Interference and Polarized Light; **26**, 570
Chasnov, Robert
—Weight vs. Mass-Round I (L); **26**, 8
Chiaverina, Chris
—An Interactive Soap Film Apparatus; **26**, 238
—The Genecon Hand-Operated Generator; **26**, 41

Clark, Clifton Bob
—Dynamical Balance and the Rotating Rod—A Personal Demonstration—Clifton Bob Clark and Stuart Thompson; **26**, 237
Clark, Robert Beck
—Illustrating Newton's Second Law with the Automobile Coast-Down Test-Ronald A. Bryan, Robert Beck Clark, and Pat Sadberry; **26**, 442
—Fundamental Particles and Interactions—A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556
Clayton, G.T.
—Experiments with Disposable Hypodermic Syringes—G.T. Clayton, T.O. Callaway, and H.D. Downing; **26**, 19
Cline, Robert A.
—Broderbund Software: *Science Toolkit Master Module and Module* 1-Speed and Motion-Robert A. Cline and John S. Risley (CR); **26**, 111
—A Comparison of Sonic Rangers for Demonstrations and Experiments in Mechanics—Robert A. Cline and John S. Risley (CR); **26**, 46

Cordero-Borboa, A.E.
—A Mechanical Lattice Aid for Crystallography Teaching—J. Amezcua-López and A.E. Cordero-Borboa; **26**, 384
Constantine, Alfred G.
—Writing Better Physics Exams—James H. Stith and Alfred G. Costantine; **26**, 138
Crane, H. Richard
—The Doppler Ball: A Novel Use of the Piezo-Electric Effect; **26**, 120
—How to Rotate a Ball from the Inside; **26**, 174
—Help for Forgetful Car Owners and Lazy Yo-Yo Throwers; **26**, 240
—What Can a Dimple Do for a Skipping Stone?; **26**, 300
—1988 Melba Newell Phillips Award; **26**, 330
—Looking Backward and Forward-Start of a New Year; **26**, 409
—A Magnetic Compass with No Moving Parts; **26**, 53
DeJong, Marvin L.
—Physics in Elementary School Textbooks; **26**, 218
—What Name Should Be Used for the Force Required to Move a Mass in a Circle?; **26**, 470

Dey, Joe
—Optical Fiber Communications—Carl Throckmorton and Joe Dey; **26**, 530
Downing, H.D.
—Experiments with Disposable Hypodermic Syringes-G.T. Clayton,T.O. Callaway, and H.D. Downing; **26**, 19
E-Qing, Zhu
—A Demonstration to Show the Upthrust Exerted by Air; **26**, 401
Easton, D.
—Mass is Not Destroyed; **26**, 230
—Response to Fly Physics (L); **26**, 329
Eddy, J.
—Simple Free Fall Apparatus—J. Fox, N. Gaggini, and J. Eddy; **26**, 108
Edgar, Dale
—Simulating Optical Fibers; **26**, 504
Edge, Ronald D.
—A Siphon Demonstration; **26**, 114
—A Physical Fountain; **26**, 294
—Murphy's Law or Jelly-Side Down; **26**, 392
—The Two-Cent Turbine or Magic Millwheel; **26**, 468
—Coefficient of Restitution; **26**, 540
—Surface Tension; **26**, 586

Ellingson, James G.
—A Frankenstein Demonstration with the Van De Graaff Generator; **26**, 446
Ellisen, Raleigh
—Letter From The Space Center, H.S.F. Cooper, *New Yorker*, June 8, 1987 (GR); **26**, 127
—Dark Time, R. Preston, *New Yorker*, Oct. 26 1987 (GR); **26**, 411
Erzberger, Andria
—Fundamental Particles and Interactions—A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556
Evans, K.R.
—Do-it-yourself superconductors, P.Grant, *New Scientist*, July 30, 1987 (GR); **26**, 127
—The Art of Performing Lecture Demonstrations; (AVR) **26**, 242
Evans, Leonard
—The Science of Traffic Safety; **26**, 426
Farrell, Charlotte T.
—The Slooooow Camera; **26**, 581
Faucher, Guy
—Ferromagnetism and the Secret Agent; **26**, 30
Ficken, George W., Jr.
—Potential Energy Closes Gate; **26**, 164
—More on the Inverted Glass (L); **26**, 491
—Balancing a Tilting Canal Bridge; **26**, 510
Fields, Carl C.
—The View From Mimas; **26**, 207
—*Wind as a Geological Process on Earth, Mars, Venus, and Titan*, R. Greeley and J.D. Iverson, Cambridge Univ. Press, NY, 1985 (BR); **26**, 592
Foland, William D.
—Mass Extinctions Caused by Large Bolide Impacts, L.W. Alvarez, *Physics Today*, July 1987 (GR); **26**, 192
Ford, Kenneth W.
—Clouds and Nuggets (L); **26**, 9
Fox, John N.
—Simple Free Fall Apparatus—J. Fox, N. Gaggini, and J. Eddy; **26**, 108
Framme, Ken
—More on Marshmallows (L); **26**, 491
Franklin, Bill
—More On Toy Airplanes (L); **26**, 264
Fried, Vojtech
—Does a Photon Gas Obey the Law of Atmospheres?—Warren Hirsch and Vojtech Fried; **26**, 100
Frischnecht, Amalie
—Science and Math Education in the Public Schools; **26**, 311
Gaggini, N.
—Simple Free Fall Apparatus—J. Fox, N. Gaggini, and J. Eddy; **26**, 108
Gardner, Robert
—Doc Edgerton: The Man Who Made Time Stand Still, E. Zwingle, *National Geographic*, Oct. 1987 (GR); **26**, 127
George, Simon
—The One Year
Non-Calculus Physics Course: An Update; **26**, 231
Gewanter, David
—Operation "Physicswitch"—David Gewanter and Paul Hickman; **26**, 569
Glavacic, Mario
—A Fast and Accurate Technique with the Prism Spectrometer—T.A. McMath and Mario Glavacic; **26**, 461

Goehl, John F., Jr.
—Is the Extrapolation Linear?; **26**, 105

Goth, George W.
—A Brief Etymology of Words Used in Physics; **26**, 576
Grable-Wallace, Lisa
—Suggested Courseware for the Non-Calculus Physics Student: Measurement, Vectors, and One-Dimensional Motion—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 437
—Suggested Courseware for the Non-Calculus Physics Student: Newton's Laws, Energy, and Momentum—Joyce Mahoney, Lisa Grable-Wallace and Prabha Ramakrishnan; **26**, 511
—Suggested Courseware for the Non-Calculus Physics Student: Projectile Motion, Circular Motion, Rotational Dynamics, and Statics—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 567
Graham, Andy
—*Exploratorium Cookbook* III, Ron Hipschman, Exploratorium, CA, 1987, (BR); **26**, 320
—*Working Prototypes: Exhibit Design at the Exploratorium*, Frank Oppenheimer and the Expl. Staff, Exploratorium, CA, 1986, (BR) **26**, 320

Gram, F.P.
—More on Skiers Leaning Forward (L); **26**, 71
Green, David L.D.
—Newton's Truck: Determining Mass and Finding 'g' by Pushing a Truck across a Parking Lot—David L.D. Green and David T. Hartney; **26**, 448
Greenler, Robert G.
—1988 Robert A. Millikan Lecturer; **26**, 331
Greenslade, Thomas B., Jr.
—Hare's Apparatus; **26**, 26
—Standing Waves and Beats Displayed by Foam Packing; **26**, 396
Greenwood, Margaret S.
—Realistic Applications in Mechanics, The Spode Group, Oxford Univ. Press, MA, 1986 (BR); **26**, 414
Gronseth, Philip W.
—Skiing Revisited—To Lean Or Not To Lean?—Philip W. Gronseth and Marc R. Hallada; **26**, 584
Guernsey, Janet B.
—TPT Family; **26**, 56
Guerra-Vela, C.
—Composite Samples for an Archimedes' Principle Experiment—C. Guerra-Vela and D.J. Bord; **26**, 95

Gupta, Parshotam D.
—Coloration on a String Vibrating in a Standing Wave Pattern; **26**, 371
Hageseth, Gaylord T.
—The Physics of an Exercise Bike; **26**, 226
Hallada, Marc R.
—Skiing Revisited—To Lean Or Not To Lean?—Philip W. Gronseth and Marc R. Hallada; **26**, 584
Hansson, B.
—Updating Physics (L); **26**, 491
Harkay, J. Russell
—To Utopia and Back, N.H. Horowitz, Freeman, NY, 1986 (BR); **26**, 319
Harrison, David
—Computerized Pre-checking of Laboratory Data—David Harrison and John M. Pitre; **26**, 156
Hartney, David T.
—Newton's Truck: Determining Mass and Finding 'g' by Pushing a Truck across a Parking Lot—David L.D. Green and David T. Hartney; **26**, 448
Hartt, Kenneth
—Beta Decay; **26**, 471

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Head, C.E.
—Red Shifts with Obliquely Approaching Light Sources—C.E. Head and M.E. Moore-Head; **26**, 102
Heald, Mark A.
—Maximum Power Transfer vs. Efficiency (L); **26**, 10
Hellemans, J.
—Visualization of the Ideal Gas Equation; **26**, 398
Hetzel, Robert
—Perspectives on Science-Technology-Society Instruction, P. Rubba, *School Science and Mathematics*, March 1987 (GR); **26**, 192
—Teaching Problem Solving in Mathematics and Science with expert Systems, R. Lippert, *School Science and Mathematics*, Oct. 1987 (GR); **26**, 316

Hewitt, Paul G.
—Falling in Air; **26**, 117
—The Helium-Filled Balloon will...?; **26**, 179
—Lamp Efficiency; **26**, 247
—Electric Circuit; **26**, 313
—Moving Molecules; **26**, 473
—A Steamy Experiment (L); **26**, 491
—Skidding; **26**, 543
—Icecraft With Fan; **26**, 57
—Response to Why Do Skiers Lean Forward (or Backward)? and More on Skiers Leaning Forward—Albert A. Bartlett and Paul G. Hewitt (L); **26**, 71
—Magnetic Tack; **26**, 593
Hewko, Richard A.D.
—The Racing Car Turn; **26**, 436
Hickman, Paul
—Quantum Frog Race—Robert Marzewski and Paul Hickman; **26**, 514
—Operation "Physicswitch"—David Gewanter and Paul Hickman; **26**, 569
Hinrichsen, P.F.
—A Photogate Design for Air Track Experiments; **26**, 42
Hirsch, Warren
—Does a Photon Gas Obey the Law of Atmospheres?—Warren Hirsch and Vojtech Fried; **26**, 100
Hodges, Laurent
—*A Guide to Small Wind Energy Conversion Systems*, J. Twidell, Ed., Cambridge Univ. Press, NY, 1987 (BR); **26**, 481
Holcomb, Donald F.
—Physics, Naturally (L); **26**, 265
Holmes, Brian
—Model of Astigmatism—Mark Riegel and Brian Holmes; **26**, 96
Hood, C. Gregory
—Response to Clouds and Nuggets (L); **26**, 9
Hooper, William
—Star Wars Goes Metric; **26**, 307
—Response to Weight vs. Mass (L); **26**, 8
Hubisz, John L.
—Quantum Physics: Illusion or Reality?, A. Rae, Cambridge Univ. Press, NY (BR); **26**, 250
Hudson, H.T.
—The Most Obvious Explanation Is Not Always Correct; **26**, 34

Huff, G. Bradley
—Response to Dissectible Capacitor Discussed (L); **26**, 10
Huner, B.
—An Alternate Brush Material for Electrostatic Generators (L); **26**, 265
Hunter, Geoffrey
—Max Planck's Natural Units—Robert L. Wadlinger and Geoffrey Hunter; **26**, 528
Insley, Peter
—Bubble Maker Interference—Earl Zwicker and Peter Insley; **26**, 184
—Flying Halloween Witch—Earl Zwicker and Peter Insley; **26**, 476

Iona, Mario
—More Errors in Revised Editions; **26**, 126
—Least Squares of What? (L); **26**, 201
—Red Hot (L); **26**, 265
—Questions and Answers; **26**, 406
—Science for Teachers; **26**, 467
—Thermodynamics for Elementary Teachers; **26**, 537
—Weightlessness and Microgravity (L); **26**, 72
—Dissectible Capacitor Discussed (L); **26**, 9
—Generator Efficiency (L); **26**, 555
Jackson, Francine
—Quasar Astronomy, D.W. Weedman, Cambridge Univ. Press, 1986 (BR); **26**, 254
—Quasars, Redshifts, and Controversies, Berkeley Interstellar Media, 1987 (BR); **26**, 592
Jenkins, Douglas C.
—A Thanksgiving Turkey Shoot-Physics Style; **26**, 516
Jewett, John W., Jr.
—Putting the Heart before the Course—Humor in Physics Teaching; **26**, 182

Jihui, Duan
—The Motion of a Point in a Rigid Body on a Horizontal Plane—Duan Jihui and Charles T.P. Wang; **26**, 575
Jovanovic, Drasco
—Fundamental Particles and Interactions—A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556

Kahn, Leonard M.
—The Quantum Universe, T. Hey and P. Walters, Cambridge Univ. Press, 1987 (BR); **26**, 414
Kalantar, A.H.
—Linear Regression (L); **26**, 328
Kaliski, Janice G.
—Matter and Energy, P.T. Spencer, K.G. McNeill and J.H. MacLachlan, Irwin Pub., Canada, 1987 (BR); **26**, 546
Kasting, Robert
—Airplane Dynamics: Engine Thrust, Engine Braking, and Wing Lift; **26**, 122
Kaufman, Charles
—Knotted Doughnuts and Other Mathematical Entertainments, M. Gardner, W.H. Freeman & Co., NY, 1986 (BR); **26**, 62
Keeports, David
—Standing Waves in a Styrofoam Cup; **26**, 456
Kelsey, Linda J.
—New Mnemonics (L); **26**, 72
Kernohan, James C.
—Practical Astronomy, D.H. DeVorkin, Smithsonian Inst. Press, WA, 1986 (BR); **26**, 63
Kimbrough, Emory
—A Modest Proposal (L); **26**, 491

Kirkpatrick, Larry D.
—*Physics for Scientists and Engineers with Modern Physics*. 2nd ed. R. A. Serway, Saunders College Pub., NY, 1986 (BR); (AVR) **26**, 254
—Television Experiments (AVR); **26**, 541
Kolodiy, George Oleh
—Projectile Motion with the Turtle; **26**, 374
Kowalski, Ludwik
—A Myth about Capacitors in Series; **26**, 286
Krohl, Robert
—A Convex Lens as a Thick Mirror; **26**, 18
Kruglak, Haym
—Taking a Random Walk on TV; **26**, 157
Kuhn, William R.
—Solar Radiation and the Earth's Atmosphere—William R. Kuhn and Susan E. Postawko; **26**, 266
Kwasnoski, John
—Converting a Hand Calculator into an Event Counter; **26**, 109
Labrecque, Rodney
—*Principles of Physics*, F. J. Blatt, Allyn and Bacon, MA, 1986 (BR); **26**, 252
—Meditations at Sunset, J. Trefil, Scribners, NY, 1987 (BR); **26**, 999
Lang, Charles
—*Physics Demonstrations and Experiments for High Schools*, G.E. Jones, Mississippi State Univ., Phys. Dept., 1987 (BR); **26**, 189
Leinoff, Stuart
—The Leinoff Principal (L); **26**, 424
Levan, Peter
—Setting A Mousetrap; **26**, 32
Levi, F.A.
—A New Look for Coriolis; **26**, 508
Lock, Frank
—*Planet Earth*, J. Weiner, Bantam Books, NY, 1986 (BR); **26**, 191

Lucido, Horace Rog
—Coaching Physics; **26**, 333
Luttikhuizen, Marinus G.
—Color Mixing Using a Single Projector; **26**, 296
Luzader, Stephen
—What a Jerk! (L); **26**, 423
Luzader, William
—*The Cambridge Astronomy Guide*, B. Liller and B. Mayer, Cambridge Univ. Press, Cambridge, England, 1985 (BR); **26**, 190
—Astronomy: Comets (AVR); **26**, 585
Mahoney, Joyce
—Suggested Courseware for the Non-Calculus Physics Student: Measurement, Vectors, and One-Dimensional Motion—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 437
—Suggested Courseware for the Non-Calculus Physics Student: Newton's Laws, Energy, and Momentum—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 511
—Suggested Courseware for the Non-Calculus Physics Student: Projectile Motion, Circular Motion, Rotational Dynamics, and Statics—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 567
Mak, Se-yuen
—Measurement of Self-Inductance—S.Y. Mak and P.K. Tao; **26**, 378
—A Simple Method to Determine the Refractive Index of Glass; **26**, 526

Maloney, Donald
—Licensed to... (L); **26**, 136

March, Robert H.
—Who Will Win the Race?; **26**, 297
Martin, Douglas R.
—Distinguishing Fact from Explanation is not Always Easy; **26**, 222
—Encouraging Critical Thought: Alternative Problem Forms; **26**, 288
Marzewski, Robert
—*Problems in Physics*, E.D. Gardiner and B.L. McKittick, McGraw-Hill Book Co., Sydney, 1985 (BR); **26**, 480
—Chain Reaction Model; **26**, 514
—Quantum Frog Race—Robert Marzewski and Paul Hickman; **26**, 514
Mattila, Jukka O.
—Physics at the Fire Station; **26**, 440
McAlexander, Aaron
—Measurement of a Thermodynamic Constant; **26**, 235
McGeachy, Frank
—Radioactive Decay-An Analog; **26**, 28
McGehee, John
—Physics Students' Day at Six FlagsMagic Mountain; **26**, 12 •
McGowan, Larry
—Response to Weightlessness and Microgravity (L); **26**, 72
McMath, T.A.
—A Fast and Accurate Technique with the Prism Spectrometer—T.A. McMath and Mario Glavacic; **26**, 461
McNeil, Ed
—Newton's Laws with Jumping Disks—Earl Zwicker and Ed McNeil; **26**, 308
Mellen, Walter Roy
—Atmospheric Electrostatics, L. Wahlin, Research Studies Press, Ltd., and John Wiley and Sons, NY, 1986 (BR); **26**, 318

Meyer, Joe
—Ladder Physics—Earl Zwicker and Joe Meyer; **26**, 532
Miles, Carol L.
—Ice and Balls; **26**, 536
Miner, Thomas D.
—*Societal Issues, Scientific Viewpoints*, M.A. Strom, Ed., AIP, NY, 1987 (BR); **26**, 547
Minnix, Richard Bryant
—1988 Distinguished Service Citation; **26**, 205
Mirabelli, Andre
—Computer Simulation Concerns (L); **26**, 200
Monce, Michael
—Further Physics of Aircraft Flight (L); **26**, 202
Moore-Head, M.E.
—Red Shifts with Obliquely Approaching Light Sources—C.E. Head and M.E. Moore-Head; **26**, 102
Morgan, Bruce
—Electricity Defined (L); **26**, 136
Morgan, Robert
—Reindeer Physics (L); **26**, 555
Morse, Robert A.
—Determining the Effect of Tire Pressure on Rolling Resistance; **26**, 225
—More on the Angular Momentum Air Top (L); **26**, 7

Mosca, Eugene P.
—*The Physics of Vibrations and Waves*, D.M. Scott, Merrill Pub. Co., OH, 1985 (BR); **26**, 62
Murugesan, Poovan
—*Inquiry into Physics*, V.J. Ostdiek and D.J. Bord, West Pub. Co., MN, 1987 (BR); **26**, 415
Myers, Glenn A.
—Doppler Shift Viewed as a Result of Variable Delay; **26**, 284

Nachtigall, D.
—No Cement Needed! (L); **26**, 200
Nalence, Eugene E.
—Using Automobile Road Test Data; **26**, 278
Neff, Robert F.
—Chasing Sunraycer Across Australia, S.F. Brown, *Popular Science*, Feb. 1988 (GR); **26**, 316
Neubert, Alex C.
—A Physics Time Line; **26**, 165
Noll, Ellis D.
—Measuring Capacitance and the Dielectric Constant; **26**, 169
Nunes, A.C.
—*The Neglect of Experiment*, A. Franklin, Cambridge Univ. Press, NY, 1986 (BR); **26**, 189
Otto, Fred B.
—Unlocking the Confusing World of Rotation; **26**, 382
—*Civil Defense: A Choice of Disasters*, J. Dowling and E.M. Harrell, Ed., AIP, NY, 1987 (BR); **26**, 480
Ouellet, Carol
—Should the Prism Be Well Centered?; **26**, 162

Park, John C.
—Vernier Software: *Precision Timer II* (CR); **26**, 402
Parrott, Mary Ethel
—Little Caltech's Big Reputation, J. Ellis, *Smithsonian*, Sept. 1987 (GR); **26**, 127
—Quantum Physics' World: Now You See It, Now You Don't, J. Trefil, *Smithsonian*, Aug. 1987 (GR); **26**, 192
—The Chernobyl Disaster, D.R. Marples, *Current History*, Oct. 1987 (GR); **26**, 316
—Career Video (AVR); **26**, 466
Pasachoff, Jay M.
—Up-to-Date Astronomy Revisited (L); **26**, 424
Pereira, Neves
—A Method of Recording Rotational Motion on a Conventional Air Table—Neves Pereira and Stuart M. Quick; **26**, 170
Phillips, Thomas
—What Do You Do the First Day of Physics Class?—Yvette A. Van Hise and Thomas Phillips; **26**, 291
Pitre, John M.
—Computerized Pre-checking of Laboratory Data—David Harrison and John M. Pitre; **26**, 156
Pizzo, Joe
—1988 Distinguished Service Citation; **26**, 206
Postawko, Susan E.
—Solar Radiation and the Earth's Atmosphere—William R. Kuhn and Susan E. Postawko; **26**, 266
Preston, N.K.
—Physics Laboratory Reports in the Community College Setting; **26**, 588
Priebe, Frederick S.
—Fundamental Particles and Interactions—A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556
Prigo, Robert B.
—Liquid Beans; **26**, 101
Prokop, Charles F.
—Teaching Physics and Feeling Good About It; **26**, 574

Quick, Stuart M.
—A Method of Recording Rotational Motion on a Conventional Air Table—Neves Pereira and Stuart M. Quick; **26**, 170
Quinn, Helen R.
—Fundamental Particles and Interactions—A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556

Ramakrishnan, Prabha
—Suggested Courseware for the Non-Calculus Physics Student: Measurement, Vectors, and One-Dimensional Motion—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 437
—Suggested Courseware for the Non-Calculus Physics Student: Newton's Laws, Energy, and Momentum—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 511
—Suggested Courseware for the Non-Calculus Physics Student: Projectile Motion, Circular Motion, Rotational Dynamics, and Statics—Joyce Mahoney, Lisa Grable-Wallace, and Prabha Ramakrishnan; **26**, 567

Ramsey, Norman F.
—1988 Oersted Medal; **26**, 204
Reed, B. Cameron
—Dot Products And Great-Circle Distances; **26**, 280
Rehbein, David J.
—Ban™ Deodorant Ball Mortar—D. Rae Carpenter, Jr., David J. Rehbein and Robert J. Bonometti; **26**, 522
Reid, Bill
—Rotational Inertia; **26**, 405
Resnick, Robert
—Ferment in Introductory College Physics; **26**, 75
Riegel, Mark
—Model of Astigmatism—Mark Riegel and Brian Holmes; **26**, 96

Risley, John S.
—Broderbund Software: *Science Toolkit Master Module and Module1—Speed and Motion*—Robert A. Cline and John S. Risley (CR); **26**, 111
—Educational Materials and Equipment Company: *Collisions and Simple Harmonic Motion*—LeVonda S. Ritchie and John S. Risley (CR); **26**, 302
—A Comparison of Sonic Rangers for Demonstrations and Experiments in Mechanics–Robert A. Cline and John S. Risley (CR); **26**, 46
Ritchie, LeVonda S.
—Educational Materials and Equipment Company: *Collisions and Simple Harmonic Motion*—LeVonda S. Ritchie and John Risley (CR); **26**, 302

Roeder, John L.
—The Jupiter-Io Connection: An Alfven Engine in Space, J.W. Belcher, *Science*, 238, 1987 (GR); **26**, 127
—A Visit to Chernobyl, R. Wilson, *Science*, June **26**, 1987 (GR); **26**, 127
—A Younger Universe is Seen in the Stars, M.M. Waldrop, *Science*, July 24, 1987 (GR); **26**, 192
—Teaching Reasoning, R.E. Nisbett, G.T. Fong, D.R. Lehman and P.W. Cheng, *Science*, Oct. 30, 1987 (GR); **26**, 316
—A Modern Galileo (AVR); **26**, 404
—The Discovery of a Class of High-Temperature Superconductors, K.A. Muller and J.G. Bednorz, *Science*, Sept. 4, 1987 (GR); **26**, 411
—Chaos, Strange Attractors, and Fractal Basin Boundaries in Nonlinear Dynamics, C. Grebogi, E. Ott and J.A. Yorke, *Science*, Oct. 30, 1987 (GR); **26**, 411
—Martian Meteorites, R.A. Kerr, *Science*, 237, pp. 721–723 (GR); **26**, 411

Roper, L. David
—*Scientific Programming with Macintosh Pascal*, R.E. Crandall and M. Colgrove, John Wiley & Sons, Inc., NY, 1986 (BR); **26**, 320

Rossing, Thomas D.
—106 Decibels! (L); **26**, 264
—Topical Organization of the Introductory Physics Course; **26**, 282
—The Doppler Effect and Racing Cars (L); **26**, 423
—*The Musician's Guide to Musical Acoustics*, M. Campbell and C. Greated, MacMillan Pub. Co., NY, 1987 (BR); **26**, 482
—Simple Vibrating Systems; **26**, 50
—Why Do Skiers Lean Forward (or Backward)? (L); **26**, 71
Rudd, M. Eugene
—The Rainbow and the Achromatic Telescope: Two Case Studies; **26**, 82
Ruebush, James
—Fundamental Particles and Interactions—A Wall Chart of Modern Physics—The Fundamental Particle and Interactions Chart Committee; **26**, 556

Ruiz, Michael J.
—*Seeing the Light: Optics in Nature, Photography, Color Vision and Holography*, D.S. Falk, D.R. Brill, D.G. Stork, Harper and Row Pub., Inc., NY, 1986 (BR); **26**, 252
Russell, John J.
—*Main Points in Physics*, J. Morgan and F. Meeking, The Jacaranda Press, Australia, 1987 (BR); **26**, 482
Rutledge, Carl T.
—Weight vs. Mass-Round II (L); **26**, 8
Sadberry, Pat
—Illustrating Newton's Second Law with the Automobile Coast-Down Test—Ronald A. Bryan, Robert Beck Clark, and Pat Sadberry; **26**, 442
Scott, Bernard
—An Intriguing Problem in Equivalent Resistance; **26**, 578
Sherfinski, John M.
—Acceleration from the Energy Function Derivative; **26**, 228
—Rotational Dynamics—Two Fundamental Issues; **26**, 290 Coupled Systems with Constrained Accelerations; **26**, 454

Shult, Donald E.
—Pulling Your Cups Apart (L); **26**, 424
Siegel, Daniel M.
—*Intellectual Mastery of Nature: Theoretical Physics from Ohm to Einstein*, 2 vols., C. Jungnickel and R. McCormmach, Univ. of Chicago Press, IL (BR); **26**, 317
Simon, Dick
—Physics at the Indy 500—Chris Buethe and Dick Simon; **26**, 274 •
Smith, Robert D.
—Seasonal Simulations; **25**, 605; **26**, 10
Smith, Ronald E.
—*The Mechanical Universe-Mechanics and Heat*, Adv. Ed., S.C. Frautschi, R.P. Olenick, T.M. Apostil and D.L. Goodstein, Cambridge Univ. Press, NY, 1986 (BR); **26**, 191
Southworth, Tom
—*The Ghost in the Atom*, P.C.W. Davies and J.R. Brown, Ed., Cambridge Univ. Press, NY, 1986 (BR); **26**, 483

Spradley, Joseph L.
—Hertz and the Discovery of Radio Waves and the Photoelectric Effect; **26**, 492
Stauffer, Frederic R.
—Achilles and the Tortoise; **26**, 36
Steckline, Vincent S.
—My Rediscovery of Inexpensive, Universal Timing Instruments; **26**, 285

Stith, James H.
—Writing Better Physics Exams—James H. Stith and Alfred G. Costantine; **26**, 138
—*The Particle Hunters*, Y. Ne'eman and Y. Kirsh, Cambridge Univ. Press, NY, 1986 (BR); **26**, 251
Strassenburg, Arnold A.
—Meet Your New AAPT President: Robert Resnick; **26**, 74
Stringer, Gene A.
—*Understanding Circuit Analysis*, K. Eckert, D & K Publishers, La Mesa, CA, 1985 (BR); **26**, 190
Swartz, Clifford E.
—A Morality Tale for Physics Teachers; **25**, 154; **26**, 72

Szeszol, James
—Lemon Screamer—Earl Zwicker and James Szeszol; **26**, 60
Takahashi, Leo
—Response to Least Squares of What? (L)—Ernest Zebrowski, Jr. and Leo Takahashi; **26**, 201
—Response to Linear Regression (L)—Ernest Zebrowski, Jr. and Leo Takahashi; **26**, 328
Takats, Martha C.
—Mathematics Education: A Predictor of Scientific Competitiveness, L.A. Steen, *Science*, 237, 1987 (GR); **26**, 127
Tan, A.
—More on Kicking a Football (L); **26**, 200
—Whither Plumb Line?; **26**, 219

Tao, P.K.
—Measurement of Self-Inductance—S.Y. Mak and P.K. Tao; **26**, 378
Tea, Peter L., Jr.
—Essay on Gyroscopic Motions; **26**, 28
Teague, Charles D.
—Tutorial Slides for the Tektronix 2213 Oscilloscope; **26**, 525
Thompson, Stuart
—Dynamical Balance and the Rotating Rod—A Personal Demonstration—Clifton Bob Clark and Stuart Thompson; **26**, 237
Throckmorton, Carl
—Optical Fiber Communications—Carl Throckmorton and Joe Dey; **26**, 530

Timmons, Daniel L.
—Finding Magnetic North the Hard Way; **26**, 276
Tinker, Robert F.
—1988 Distinguished Service Citation; **26**, 206
Tobias, Sheila
—Peer Perspectives on Physics; **26**, 77
Toepker, Terrence P.
—Newton and the Apples; **26**, 165
Toews, William
—Why Take Physics in High School—Why Plan to Teach Physics?; **26**, 458
Tompkins, Everette E.
—Rotational Motion Demonstrator; **26**, 187
Van Ausdal, Ray G.
—Structured Problem Solving in Kinematics; **26**, 518
Van Hise, Yvette A.
—What Do You Do the First Day of Physics Class?—Yvette A. Van Hise and Thomas Phillips; **26**, 291
—Student Misconceptions in Mechanics: An International Problem?; **26**, 498

Van Wyk, Steve
—Electromagnetism Problems; **26**, 115
—Relativity Problems; **26**, 177
—Ocean Physics Problems; **26**, 243
Wadlinger, Robert L.
—Max Planck's Natural Units—Robert L. Wadlinger and Geoffrey Hunter; **26**, 528
Wallingford, J.
—Photo-Icicle Pattern on a Rotating Wheel; **26**, 399
Wang, Charles T.P.
—The Motion of a Point in a Rigid Body on a Horizontal Plane—Duan Jihui and Charles T.P. Wang; **26**, 575

Webb, Jerry
—Eratosthenes Revisited—Jerry Webb and Roberta Bustin; **26**, 154
Weinstock, Robert
—On the Shoulders of Giants (L); **26**, 264
—But First Get It Right! (L); **26**, 7
Welty, Scott
—Frames of Reference—Earl Zwicker and Scott Welty; **26**, 245
Wereley, Ian A.
—Galileo's Argument on Free Fall; **26**, 394
Western, A.
—An Inexpensive Acoustic Trigger for Dramatic Flash Photographs—A. Western and J.H. Archibald; **26**, 464

Wheeler, Gerald F.
—*The Advancement of Science, and its Burdens*, G. Holton, Cambridge Univ. Press, NY, 1986 (BR); **26**, 253
Whitaker, Robert J.
—L.R. Wilberforce and the Wilberforce Pendulum; **26**, 37
Wild, R.L.
—Viewing Vertical Objects with an Overhead Projector; **26**, 572
Wilhite, Lora
—Halley Watch from Easter Island, W. Liller, *Mercury*, Sept.Oct. 1987 (GR); **26**, 316
Willis, Courtney W.
—The Wisdom of Science: Its Relevance to Culture and Religion, H. Brown, Cambridge Univ. Press, NY, 1986 (BR); **26**, 480
Willis, Jack
—Editor's Note to What a Jerk! (L); **26**, 423
—A Question for the Speaker; **26**, 463

Wilson, Alpha E.
—*Mathematics Review Workbook for College Physics*, H.T. Hudson, Little, Brown & Co., MA, 1986 (BR); **26**, 63
Wolff, Barbara
—Amusement Park Physics (L); **26**, 555
Worrell, Francis T.
—Resistor Mnemonics (L); **26**, 329
Zaleskiewicz, Thad P.
—Fundamental Particles and Interactions—A Wall Chart of Modern Physics—The Fundamental Particles and Interactions Chart Committee; **26**, 556
Zebrowski, Ernest, Jr.
—Aiming a Satellite Dish; **26**, 153
—Response to Least Squares of What? (L)—Ernest, Jr. Zebrowski and Leo Takahashi; **26**, 201
—Response to Linear Regression (L)—Ernest, Jr. Zebrowski and Takahashi; **26**, 328

Zicko, Dennis P.
—Spin-Out Velocity of a Slot Car; **26**, 452
—*Engineering Projects for Young Scientists*, P. Goodwin, Franklin Watts, NY, 1987 (BR); **26**, 483
Zwicker, Earl
—Timing Projectile Motion—Earl Zwicker and Ann Brandon; **26**, 124
—Bubble Maker Interference—Earl Zwicker and Peter Insley; **26**, 184
—Frames of Reference—Earl Zwicker and Scott Welty; **26**, 245
—Newton's Laws with Jumping Disks—Earl Zwicker and Ed McNeil; **26**, 308
—Flying Halloween Witch—Earl Zwicker and Peter Insley; **26**, 476
—Ladder Physics—Earl Zwicker and Joe Meyer; **26**, 532
—Lemon Screamer—Earl Zwicker and James Szeszol; **26**, 60

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